

What is claimed is:

1. An information-recording medium comprising a substrate and a recording layer which is rewritable in accordance with phase-change caused by being irradiated with a laser beam, wherein the recording layer contains Bi, Ge, and Te, and composition ratios thereof are within a range surrounded by the following respective points on a triangular composition diagram having apexes corresponding to Bi, Ge, and Te:

B3 (Bi₃, Ge₄₆, Te₅₁);
C3 (Bi₄, Ge₄₆, Te₅₀);
D3 (Bi₅, Ge₄₆, Te₄₉);
D5 (Bi₁₀, Ge₄₂, Te₄₈);
C5 (Bi₁₀, Ge₄₁, Te₄₉);
B5 (Bi₇, Ge₄₁, Te₅₂).

2. An information-recording medium comprising a substrate and a recording layer which is rewritable in accordance with phase-change caused by being irradiated with a laser beam, wherein the recording layer contains Bi, Ge, and Te, and composition ratios thereof are within a range surrounded by the following respective points on a triangular composition diagram having apexes corresponding to Bi, Ge, and Te, and the recording layer has a film thickness of not more than 15 nm:

B2 (Bi₂, Ge₄₇, Te₅₁);

C2 (Bi₃, Ge₄₇, Te₅₀);
 D2 (Bi₄, Ge₄₇, Te₄₉);
 D6 (Bi₁₆, Ge₃₇, Te₄₇);
 C8 (Bi₃₀, Ge₂₂, Te₄₈);
 B7 (Bi₁₉, Ge₂₆, Te₅₅).

3. An information-recording medium provided as an optical disk comprising a recording layer which is rewritable in accordance with phase-change caused by being irradiated with a laser beam, wherein a relationship between a recording linear velocity V1 at a radius R1 and a recording linear velocity V2 at a position R2 disposed outside R1 satisfies $V2/V1 \geq R2/R1$, and the recording layer contains Bi, Ge, and Te, and composition ratios thereof are within a range surrounded by the following respective points on a triangular composition diagram having apexes corresponding to Bi, Ge, and Te:

B2 (Bi₂, Ge₄₇, Te₅₁);
 C2 (Bi₃, Ge₄₇, Te₅₀);
 D2 (Bi₄, Ge₄₇, Te₄₉);
 D6 (Bi₁₆, Ge₃₇, Te₄₇);
 C8 (Bi₃₀, Ge₂₂, Te₄₈);
 B7 (Bi₁₉, Ge₂₆, Te₅₅).

4. The information-recording medium according to claim 3, wherein $R2/R1 \geq 1.5$ is satisfied.

5. The information-recording medium according to claim 3, wherein $R2/R1 \geq 2.4$ is satisfied.

6. The information-recording medium according to claim 3, wherein $8.14 \text{ m/s} \leq V1 \leq 8.61 \text{ m/s}$ is satisfied.

7. An information-recording medium comprising a recording layer which is rewritable multiple times and which is formed on a substrate having a recording track formed thereon, for recording information by causing phase-change in the recording layer under a recording condition in which a track pitch TP is smaller than $0.6 \times (\lambda/NA)$ by scanning the recording track having the track pitch of TP across a laser beam having a wavelength λ collected by an objective lens having a numerical aperture of NA, wherein the recording layer contains Bi, Ge, and Te, and composition ratios thereof are within a range surrounded by the following respective points on a triangular composition diagram having apexes corresponding to Bi, Ge, and Te:

B2 ($Bi_{12}, Ge_{47}, Te_{51}$);

C2 ($Bi_{13}, Ge_{47}, Te_{50}$);

D2 ($Bi_{14}, Ge_{47}, Te_{49}$);

D6 ($Bi_{16}, Ge_{37}, Te_{47}$);

C8 ($Bi_{30}, Ge_{22}, Te_{48}$);

B7 ($Bi_{19}, Ge_{26}, Te_{55}$).

8. An information-recording medium comprising a

substrate and a recording layer which is rewritable in accordance with phase-change caused by being irradiated with a laser beam, wherein the information-recording medium has a disk-shaped configuration, a groove is previously formed in a concentric form or in a spiral form on the substrate, at least one of the groove and a land between the grooves is used as a recording track, at least one of the groove and the land is wobbled, and the recording layer contains Bi, Ge, and Te, and composition ratios thereof are within a range surrounded by the following respective points on a triangular composition diagram having apexes corresponding to Bi, Ge, and Te:

B2 (Bi₂, Ge₄₇, Te₅₁);
C2 (Bi₃, Ge₄₇, Te₅₀);
D2 (Bi₄, Ge₄₇, Te₄₉);
D6 (Bi₁₆, Ge₃₇, Te₄₇);
C8 (Bi₃₀, Ge₂₂, Te₄₈);
B7 (Bi₁₉, Ge₂₆, Te₅₅).

9. A target for an information-recording material having a composition containing Bi, Ge, and Te, wherein composition ratios thereof are within a range surrounded by the following respective points on a triangular composition diagram having apexes corresponding to Bi, Ge, and Te:

B3 (Bi₃, Ge₄₆, Te₅₁);
C3 (Bi₄, Ge₄₆, Te₅₀);
D3 (Bi₅, Ge₄₆, Te₄₉);

D5 (Bi₁₀, Ge₄₂, Te₄₈);

C5 (Bi₁₀, Ge₄₁, Te₄₉);

B5 (Bi₇, Ge₄₁, Te₅₂).